

CLAIMS

What is claimed is:

1. A method for providing simultaneous access between at least one drive and a plurality of blade servers, comprising the steps of:

5 (a) configuring the plurality of blade servers to simultaneously connect with the at least one drive, wherein the plurality of blade servers is managed by a management system, wherein the at least one drive is coupled to the management system; and

(b) managing shared access to the at least one drive for the plurality of blade servers by the management system.

10 2. The method of claim 1, wherein the configuring step (a) comprises:

(a1) sending a command from the management system to a microprocessor at each of the plurality of blade servers to present the at least one drive; and

(a2) configuring an interface at each of the plurality of blade servers to connect with

15 the at least one drive in response to the command.

3. The method of claim 2, wherein the microprocessor comprises a digital signal processor and a device chip.

20 4. The method of claim 3, wherein the device chip is a universal serial bus device chip.

5. The method of claim 2, wherein the microprocessor routes data packets between its corresponding blade server and the management system.

6. The method of claim 2, wherein the management system routes data packets between the at least one drive and the plurality of blade servers.

7. The method of claim 2, wherein the sending step (a1) comprises:

(a1i) sending a command from a management module at the management system to the microprocessor on each of the plurality of blade servers to present at least one local drive, wherein the at least one local drive is coupled to the management system;

(a1ii) configuring a device chip on each of the plurality of blade servers by the corresponding microprocessor on each of the plurality of blade servers to present an interface for the at least one local drive; and

(a1iii) informing a host controller on each of the plurality of blade servers by the corresponding device chip on each of the plurality of blade servers that the at least one local drive is connected.

8. The method of claim 7, wherein the managing step (b) comprises:

(b1) managing the shared access to the at least one local drive for the plurality of blade servers by the management module.

9. The method of claim 2, wherein the sending step (a1) comprises:

(a1 i) sending a request to a management module at the management system to connect at least one remote drive to the plurality of blade servers, wherein the at least one remote drive is coupled to the management system through a network;

(a1 ii) establishing a connection to the microprocessor on each of the plurality of blade servers through the management module;

(a1 iv) configuring a device chip on each of the plurality of blade servers by the corresponding microprocessor on each of the plurality of blade servers to present an interface for the at least one remote drive; and

(a1 v) informing a host controller on each of the plurality of blade servers by the corresponding device chip on each of the plurality of blade servers that the at least one remote drive is connected.

10. The method of claim 9, wherein the managing step (b) comprises:

(b1) managing the shared access to the at least one remote drive for the plurality of blade servers by the management module.

11. A method for providing simultaneous connection between a plurality of drives and at least one blade server, comprising the steps of:

(a) configuring the at least one blade server to simultaneously connect with the plurality of drives, wherein the at least one blade server is managed by a management system, wherein the plurality of drives is coupled to the management system; and

(b) managing shared access to the at least one blade server for the plurality of drives

by the management system.

12. The method of claim 11, wherein the configuring step (a) comprises:

(a1) sending a command from the management system to a microprocessor on the at

5 least one blade server to present the plurality of drives; and

(a2) configuring a plurality of interfaces at the at least one blade server to connect with
the plurality of drives in response to the command.

13. The method of claim 12, wherein the microprocessor comprises a digital signal

10 processor and a device chip.

14. The method of claim 13, wherein the device chip is a universal serial bus device

chip.

15. The method of claim 12, wherein the microprocessor routes data packets between

the at least one blade server and the management system.

16. The method of claim 12, wherein the management system routes data packets

between the plurality of drives and the at least one blade server.

17. The method of claim 12, wherein the sending step (a1) comprises:

(a1i) sending a command from a management module at the management system to the

microprocessor on the at least one blade server to present a plurality of local drives, wherein the plurality of local drives is coupled to the management system;

(a1ii) configuring a device chip on the at least one blade server by the microprocessor to present the plurality of interfaces for the plurality of local drives; and

5 (a1iii) informing a host controller on the at least one blade server by the device chip that the plurality of local drives is connected.

18. The method of claim 17, wherein the managing step (b) comprises:

10 (b1) managing the shared access to the at least one blade server for the plurality of drives by the management module.

19. The method of claim 12, wherein the sending step (a1) comprises:

15 (a1i) sending a request to a management module at the management system to connect a plurality of remote drives to the at least one blade server, wherein the plurality of remote drives is coupled to the management system through a network;

(a1ii) establishing a connection to the microprocessor on the at least one blade server through the management module;

(a1iv) configuring a device chip on the at least one blade server by the microprocessor to present a plurality of interfaces for the plurality of remote drives; and

20 (a1v) informing a host controller on the at least one blade server by the device chip that the plurality of remote drives is connected.

20. The method of claim 19, wherein the managing step (b) comprises:

(b1) managing the shared access to the at least one blade server for the plurality of remote drives by the management module.

5 21. The method of claim 11, wherein the configuring step (a) comprises:

(a1) sending a command from the management system to a microprocessor on the at least one blade server to present at least one local drive and at least one remote drive; and

(a2) configuring an interface for the at least one local drive to connect with the at least one local drive, and configuring an interface for the at least one remote drive at the at least one blade server to connect with the at least one remote drive in response to the command.

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22. A system, comprising:

a management system;

at least one drive connected to the management system; and

15 a plurality of blade servers managed by the management system, wherein the plurality of blade servers are configured to simultaneously connect with the at least one drive, wherein the management system manages shared access to the at least one drive for the plurality of blade servers.

20 23. The system of claim 22, wherein the management system comprises a management module for routing data packets between the least one drive and the plurality of blade servers.

24. The system of claim 22, wherein the at least one drive comprises at least one local drive connected to the management system.

25. The system of claim 22, wherein the at least one drive comprises at least one remote drive connected to the management system through a network.

26. The system of claim 22, wherein each of the plurality of blade servers comprises a microprocessor for configuring an interface to connect with the at least one drive.

27. The system of claim 26, wherein the microprocessor comprises:
a device chip; and
a digital signal processor for configuring the interface at the device chip to connect with the at least one drive.

28. The system of claim 26, wherein each of the plurality of blade servers further comprises a host controller.

29. A system, comprising:
a management system;
a plurality of drives connected to the management system; and
at least one blade server managed by the management system, wherein the at least one blade server is configured to simultaneously connect with the plurality of drives, wherein the

management system manages shared access to the at least one blade server for the plurality of drives.

30. The system of claim 29, wherein the management system comprises a management module for routing data packets between the plurality of drives and the at least one blade server.

31. The system of claim 29, wherein the plurality of drives comprises at least one local drive connected to the management system and/or at least one remote drive connected to the management system through a network.

32. The system of claim 29, wherein the at least one blade server comprises a microprocessor for configuring a plurality of interfaces to connect with the plurality of drives.

33. The system of claim 32, wherein the microprocessor comprises:
a device chip; and
a digital signal processor for configuring the plurality of interfaces at the device chip to connect with the plurality of drives.

34. The system of claim 32, wherein the at least one blade server further comprises a host controller.

35. A computer readable medium with program instructions for providing simultaneous access between at least one drive and a plurality of blade servers, comprising the instructions for:

(a) configuring the plurality of blade servers to simultaneously connect with the at least one drive, wherein the plurality of blade servers is managed by a management system, wherein the at least one drive is coupled to the management system; and

(b) managing shared access to the at least one drive for the plurality of blade servers by the management system.